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ABSTRACT

Data from the 1988 Phi Delta Kappa National Research Study on at-risk students were used in an analysis of variables associated with being classified as "at risk." The study collected information on over 22,000 at-risk and not-at-risk students from 274 schools and 9,600 teachers from across the United States. This analysis identified variables that had a significant correlation with students not being promoted (since not being promoted is a significant predictor of dropping out) and identified the relative importance of these variables in predicting patterns of non-promotion for grades 4, 7, and 10. The seven variables taken from the study questionnaire were: (1) number of times a student is not promoted; (2) number of siblings; (3) number of siblings who dropped out; (4) number of schools attended in the last 5 years; (5) age relative to grade level; (6) number of days absent in the 1987-88 school year; and (7) number of times suspended in that school year. Overall, absence and suspension were the two variables with the most impact on non-promotion and classification as "at-risk." These two variables were national in scope, and not simply the problems of large urban schools. Students are at risk because their disruptive behavior results in suspensions, and because they are not attending school. A matrix data sheet for the student survey and a table of correlation coefficients are included. (SLD)

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Variables Associated with Students Being Classified as "At Risk"

Based on the Phi Delta Kappa National Research Study, 1988, and presented at the Mid-Western Educational Research Association Annual Meeting, Chicago, Illinois, October 20, 1989

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Variables Associated with Students Being Classified as "At Risk"

National statistics report that over 50% of inner-city children never graduate from high-school.[1] As this figure approaches the pre-World War II of 60% for all students who never graduated from high school,[2] national concern--as evidenced by newspaper headlines, journal articles and national conferences --is increasing.[3] In 1987, Phi Delta Kappa, a professional organization in education, polled delegates at its biennial council and asked them to identify significant educational issues of the 1990's. The "at risk" student headed the list and was selected to be the topic of a national research project.

The Phi Delta Kappa national survey is the most recent of research endeavors to examine the "at risk" student problem. High School and Beyond: The Condition of Education[3] provided a data base for early 1980's research on the "at risk" and dropout student. Ruth B. Ekstrom et al. report their findings in "Who Drops Out of High School and Why? Findings From a National Study."[4] They found that among the factors that differentiated dropouts from graduates include background, educational achievement and other school related behaviors, out of school activities, educational aspirations, and attitudes towards self and society.[5]

Michelle Fine, using ethnographic techniques, approaches the problem from the perspective of the dropout students. In her research she indicts the American educational system for supporting "schools [that] do little to disrupt and much to reproduce existing social arrangements . . . of gender, class, and race/ethnicity stratifications."[6] Larry Culan calls for a re-examination of the traditional, graded school,[7] and Gary Wehlage and Robert A Rutter examine the "push-out" syndrome in "Dropping Out: How Much Do Schools Contribute to the Problem?"[8]

Phi Delta Kappa's Research Bulletin (April 1989), in reporting the findings of a Cincinnati Dropout Interview Study, concludes that "results from national studies don't necessarily apply in local settings" and that "the dropout problem is not simple and generic but complex and highly specific."[9] The caveats of the Research Bulletin are a timely reminder as we undertake an analysis of another national "at risk" student sample.

The research format of the Phi Delta Kappa study was designed to address the following questions: Who is at risk? What are they like? What is the school doing to help these students? and How effective are these efforts?

The task was divided into thirteen jobs ranging from the initial formation of a research committee to the collection of data (#4--interview the principal, #5--survey teachers, #6--apply "Holding Power Statistic" to the high school, #7--write

a narrative report about each school, #8--collect student information), and finally, the dissemination of research results.

The project was designed to study students in grades four, seven and ten and involved one hundred PDK chapters. Information on over 22,000 "at risk" and not "at risk" students and 9,600 teachers from across the United States was collected. Each chapter was asked to select schools that typified their school district. The principal of each selected school identified the level: elementary, junior high, high school; and the type: large city, suburb, small city, small town and rural. All chapters followed the same directions and collected the same information on students and the community. Each chapter completed a data form on approximately one hundred students in grade four, one hundred students in grade seven, and one hundred students in grade ten. Schools were asked to collect data on intact groups of students, such as entire homerooms or classes. Data were based upon student records and opinions from people who had contact with selected students.

The PDK "Student Survey" is a fifty-eight item questionaire. Questions relating to family structure (parents' educational levels and occupations, number of siblings and family position), educational data (IQ scores, achievement test results in reading, grade retention, absence, suspension and expulsion), health concerns (serious illness, suicide, drug/alcohol abuse, physical/sexual abuse), and retention efforts by schools (smaller classes, individualized/computerized instruction, tutoring, <u>extra</u> home-

work, instruction, or opportunities for parental involvement, special teachers, instructional material, referral to special services) were answered on a matrix data sheet (Appendix). Missing data reflect ubknown information and were excluded from the study.

"Variables Associated with Students Being Classified 'At Risk'" was undertaken as an optional project (job #10) and a further analysis of the data (job #11). The objectives of this analysis are twofold. The first is to identify variables that have a significant correlation with students being non-promoted, since being non-promoted is a significant predictor of dropping out; and, the second is to identify the relative importance of these variables in predicting non-promotion patterns in grades four, seven, and ten. Seven variables taken from the Study questionaire were selected.

* number of times a student is not promoted
* number of siblings
* number of siblings who dropped out
* number of schools attended in the past five years
* age relative to grade level
* days absent in the 1987-88 school year
* number of times suspended in the 1987-88 school year

A preliminary analysis using SPSS (Statistical Package for Social Sciences) examined a series of correlates of paired variables which were recoded to inspect potential relationships. This procedure calculated the Pearson's correlation coefficient

which measures the strength of a linear relationship. A function of .5 or greater measures a strong relationship between the variables. Correlations which measure less than .5 indicate weaker relationships.[10] Data from the preliminary analysis, "Pearson Correlation Coefficients" for grades four, seven, and ten are included in the Appendix.

As one might expect, there is a strong correlation between overage and being held back at all grade levels. This correlation, .60 at Grade Four, continues through Grade Seven (.58) and Grade Ten (.56). None of the other factors reveals a strong correlation in Grade Four. When the Grade Seven and Grade Ten data are examined, the correlations are weak, ranging from .22 (Grade Seven Siblings who have dropped out) to .34 (Suspensions in Grade Ten). The data reveal increases in correlations in some variables between Grades Seven and Ten. The suspension correlation rises from .24 to .34; the Heldback/Absence correlation increases from .22 to .27, and the Heldback/Suspension correlation moves from .21 to .27. The Sibling dropout correlation reflects a similar increase, from .21 to .27. The increases in the Absence and Suspensions variables on non-promotion (heldback), the dependent variable, report the obvious: students who do not attend school are not promoted, and student misbehavior resulting in suspension (and in many cases absence from school) is a contributing factor in being heldback. Another contributing factor appears to be the influence of a sibling dropout; however, the number of siblings

does not appear to be a factor.

One question raised by PDK's Research Bulletin's "Don't Base Your Dropout Program on Somebody Else's Problem" is that of the location of the sample. Are the significant correlates found in the national sample valid predictors of non-promotion in both large urban and non large urban areas? Approximately 3,000 students of the sample were drawn from forty large urban schools. The total sample involved approximately 22,000 students from 274 schools. Of these, 95 are high schools; seventeen, of which, are large urban high schools (Table A).

TABLE A

LEVEL AND TYPE OF SAMPLE SCHOOLS

	Elementary	Junior High	High School
Large Urban	8	15	17
Suburb	21	12	10
Small City	29	34	24
Small Town	19	12	26
Rural	17	12	18
Column Totals	94	85	95

The following table (Table B) is based on the Tenth Grade sample and provides data on the significant correlates and rank order of significant predictors of the number of times a student was not promoted. The correlates and rank orders are categorized nationally, non large urban, large urban, and one large urban.

TABLE B

SIGNIFICANT CORRELATES AND RANK ORDER OF SIGNIFICANT PREDICTORS OF NUMBER OF TIMES A STUDENT WAS NOT PROMOTED (DEPENDENT VARIABLE = HELD BACK)

GRADE 10

	National		Non Large Urban		Large Urban		One Large Urban	
	r	Rank	r	Rank	r	Rank	r	Rank
Number of Siblings	.07	5	.06	5	.15		*	
Sibling Dropouts	.17	3	.16	3	.21	4	.28	
Attended Different Schools	.12	4	.10	4	.22	3	*	
Absence	.28	1	.26	2	.35	1	.33	1
Suspensions	.27	2	.27	1	.31	2	.30	
(Multiple R) R^2	.13		.12		.19		.11	

* Not Significant

The rank order of the national sample lists absence as the most significant correlate in non promotion. This ranking is the same for large urban areas, but absence is second in non large urban areas. The top ranked correlate in predicting non promotion is suspensions in non large urban areas. Suspensions are ranked second nationally and in large urban areas. Sibling dropout, ranked third nationally and in non large urban areas, is ranked fourth, after attended different schools in large urban areas. Nationally and in non large urban areas, attended different schools ranks fourth. The number of siblings is not a significant correlate in large urban schools, but this factor is ranked fifth both nationally and in non large urban schools.

To provide a perspective on the data, information from one large urban school is included in the table. Like other large urban high schools of the sample, absence is the leading factor in non promotion. Suspension is second. Sibling dropouts of this particular school has a correlation of .28 which is slightly higher than the large urban .21, and greater than the non large urban .16 and the national .17. The number of siblings and the attendance at different schools were not found to be significant in this sample.

It is clear in this study that absence and suspension are two variables that impact upon non promotion and a student being classified "at risk." These two variables are national in scope; they are not just the problems of large urban schools.

"At risk" students are indiginous to rural and small town schoolhouses, small city and suburban learning centers, and large urban comprehensive, educational complexes. They are "at risk" because their disruptive behavior results in suspension from school. They are "at risk" because they are not attending their schools--our schools.

Endnotes

[1]Michelle Fine, "Why Urban Adolescents Drop into and Out of Public High Schools," College Teachers Record 87 (1986): 91.

[2]Russell W. Rumberger, "High School Dropouts: A Review of Issues and Evidence," Review of Educational Research 57 (Summer 1987): 101.

[3]The Cleveland Plain Dealer in its series, "Empty Desks: Empty Lives," headlines 'Economic Suicide,' 'Tired teachers try everything,' and 'Fragmented programs remain far from cure,' (April 27-May 1, 1987). A sample of journal articles include Larry Culan's "At Risk Students: What Teachers and Principals Can Do," Educational Leadership 46 (Feb. 1989): 29-32 and Ray Patty's "Mananging Disruptive Students," Educational Leadership 46 (March 1989): 26-28. Among a number of national conferences are the American Federation of Teachers' Quest (Washington, D.C., July 20-22, 1989), the Northeast Regional Center for Drug-Free Schools and Communites' Prevention: The Force for Drug-Free Tomorrows workshop, "'At Risk'--The Student or a Condition--Strategies for Working With High Risk Youth," (Arlington, Virginia, Aug. 9-13, 1989), Children at Risk: An Urban Education Network Conference Proceedings (Louisville, Kentucky, Dec., 1985) and At Risk Youth, Considerations for State-Level Policymakers, Including a Summary of Recent State-Level Activities in the Region, Regional Laboratory for Educational Improvement of the Northeast & Islands (Andover, Maine, 1987).

[4]High School and Beyond: The Condition of Education (Washington, D.C.: National Center for Statistics, 1983).

[5]Ruth B. Ekstrom et al., "Who Drops out of High School and Why? Findings from a National Study," Teachers College Record 87 (1986): 393-403.

[6]Fine, 89-105.

[7]Larry Culan, "The 'At Risk' Label and the Problem of School Reform," Phi Delta Kappan (June 1989): 780-84, 799-801.

[8]Gary Wehlage and Robert A. Rutter, "Dropping Out: How Much Do the Schools Contribute to the Problem?" Teachers College Record 87 (1986): 374-93.

[9]Joseph F.Gastright, "Don't Base Your Dropout Program on Somebody Else's Problem," Phi Delta Kappa Research Bulletin 8 (April 1989): 4.

[10]J.P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill, 1956), p. 145.

Phi Delta Kappa

A Study of Students At Risk

Directions

After you record all data on the matrix data sheet, transfer to this answer blank. Return all answer blanks to:

Phi Delta Kappa
Study of Students At Risk
PO Box 789
Bloomington, IN 47401

Correct Mark

Incorrect Marks

BIRTH DATE
BORN
DAY
YR
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC

CHAPTER ID

STUDENT ID

ETHNIC GROUP

SEX
MALE
FEMALE

GRADE OR EDUCATION

INFORMATION ABOUT STUDENTS

Father's Occupation 1
Father's Education 2
Mother's Occupation 3
Mother's Education 4
Siblings 5
Position in Family 6
Sib Drop Outs 7
Family Grouping 8
Language Used 9
Attitudes 10
Residence 11
Schools 12
Achievement 13
Intelligence 14
Courses Failed 15
Age/Grade 16
Retained 17
Absences 18
Suspended 19
Expelled 20
Extra-Curric 21
Self-Esteem 22
Grades 23
Special Ed 24
Change Residence 25
Change Schools 26
Parent's Health 27
Death of Parent 28
Parent Attempt 29
Parent Lost Job 30

Divorce/Separate 31
Death of Friend 32
Illness/Accident 33
Death Sibling 34
Dropped from Team 35
Attempt Suicide 36
Pregnancy 37
Uses Drugs 38
Sells Drugs 39
Family/Drugs 40
Student Alcohol 41
Parent Alcoholic 42
Drunk Driving 43
Arrested 44
Abused 45
Small Class 46
Computer 47
Refer Spec Ed 48
Low Group 49
Individualize 50
Flexible 51
Tutor 52
Homework 53
Parents 54
Basic Skills 55
Refer Psychologist 56
Materials 57
Teachers 58

APPENDIX I

APPENDIX II

Grade Ten

PEARSON CORRELATION COEFFICIENTS

	SIBLINGS	SIBDROP	DIFFSCH	AGEREL	HELDBACK	ABSENT	SUSPEND
SIBLINGS	1.0000 (5931) P= .	.2708 (4708) P= .000	.0038 (5752) P= .409	.0510 (5854) P= .000	.0736 (5436) P= .000	.0305 (5444) P= .012	.0297 (5145) P= .017
SIBDROP	.2708 (4708) P= .000	1.0000 (4855) P= .	.0785 (4743) P= .000	.0940 (4801) P= .000	.1711 (4467) P= .000	.1715 (4589) P= .000	.1571 (4437) P= .000
DIFFSCH	.0038 (5752) P= .409	.0785 (4743) P= .000	1.0000 (6952) P= .	.1208 (6842) P= .000	.1216 (6367) P= .000	.1861 (6291) P= .000	.1099 (5948) P= .000
AGEREL	.0510 (5854) P= .000	.0940 (4801) P= .000	.1208 (6842) P= .000	1.0000 (7162) P= .	.5627 (6524) P= .000	.2478 (6437) P= .000	.1698 (6077) P= .000
HELDBACK	.0736 (5436) P= .000	.1711 (4467) P= .000	.1216 (6367) P= .000	.5627 (6524) P= .000	1.0000 (6581) P= .	.2792 (5999) P= .000	.2715 (5764) P= .000
ABSENT	.0305 (5444) P= .012	.1715 (4589) P= .000	.1861 (6291) P= .000	.2478 (6437) P= .000	.2792 (5999) P= .000	1.0000 (6532) P= .	.3432 (5736) P= .000
SUSPEND	.0297 (5145) P= .017	.1571 (4437) P= .000	.1099 (5948) P= .000	.1698 (6077) P= .000	.2715 (5764) P= .000	.3432 (5736) P= .000	1.0000 (6154) P= .

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